

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 2. (Cancelled)

3. (Currently Amended) The apparatus of claim ~~2~~5 wherein each of said two or more adaptive equalizers comprise a computational resource.

4. (Currently Amended) The apparatus of claim 3 wherein the computation resource comprises at least one item selected from the group consisting of: a summer;[[,]] a conjugation block;[[,]] a multiplier;[[,]] and a divider.

5. (Currently Amended) ~~The apparatus of claim 2~~An apparatus comprising:

two or more adaptive equalizers;

a plurality of operational blocks that interconnect the adaptive equalizers;

a first control mechanism that configures the adaptive equalizers and the plurality of operational blocks according to different signal delay profiles;

a second control mechanism that disables at least one of said plurality of operational blocks according to the different signal delay profiles; and

~~further comprising~~a third control mechanism that disables a computation resource of at least one of said adaptive equalizers according to the different signal delay profiles.

6. (Currently Amended) The apparatus of claim ~~4~~5 wherein said operational blocks comprise at least one item selected from the group consisting of:

a signal regenerator;
a delay line; and
a summer.

7. (Currently Amended) The apparatus of claim 4-5 wherein the different signal delay profiles comprise at least one multi-path signal profile selected from the group consisting of:

sub-signals that arrive to the apparatus in consecutive chip time units;
sub-signals wherein one sub-signal comprises a substantial amount of total energy of the sub-signals;
sub-signals that do not arrive to the apparatus in consecutive chip time units;
sub-signals that arrive to the apparatus in two or more clusters; and
sub-signals that arrive to the apparatus from more than one antenna.

8. (Currently Amended) ~~The apparatus of claim 5 wherein~~ An apparatus comprising:

two or more adaptive equalizers;
a plurality of operational blocks that interconnect the adaptive equalizers;
a first control mechanism that configures the adaptive equalizers and the plurality of operational blocks according to different signal delay profiles;
a second control mechanism that disables at least one of said plurality of operational blocks according to the different signal delay profiles; and
a third control mechanism that disables a computation resource of at least one of said adaptive equalizers according to the different signal delay profiles. the first, second, and third control mechanisms comprise multiplexers that receive control signals according to the different signal delay profiles.

9. (Currently Amended) The apparatus of claim 4-5 wherein a two-stage configuration of the apparatus comprises a default mode.

10. (Cancelled)

11. (Currently Amended) ~~The method of claim 10 wherein~~ A method comprising:

receiving a multi-path signal profile;

determining attributes of the multi-path signal profile, the determining comprises
determining a number of antennas at a transmitter; and

operating two or more adaptive equalizers, operating computational resources of the two
or more adaptive equalizers, and operational blocks interconnecting said two or
more adaptive equalizers according to said attributes of the multi-path signal
profile.

12. (Original) The method of claim 11 wherein determining attributes of the multi-path signal profile comprises determining a delay length of the multi-path signal profile if said number of antennas is equal to one.

13. (Original) The method of claim 12 wherein determining attributes of the multi-path signal profile comprises determining an amount of energy in a single sub-signal of the multi-path signal profile if the length of the multi-path signal profile is less than a maximum number of taps of a single adaptive equalizer.

14. (Original) The method of claim 13 wherein determining attributes of the multi-path signal profile comprises determining an amount of energy capturable by a two-stage adaptive equalizer

if said length of the multi-path signal profile requires more than the maximum number of taps of a single adaptive equalizer.

15. (Original) The method of claim 14 wherein determining attributes of the signal comprises determining a number of energy clusters of the multi-path signal profile if the amount of energy capturable by a two-stage adaptive equalizer is less than around ninety-five percent of total energy of the multi-path signal profile.

16. (Currently Amended) The method of claim ~~10-11~~ further comprising disabling at least one selected from the group:

adaptive equalizer;
operational block; and
computational resource.

17. (Cancelled)

18. (Currently Amended) ~~The system of claim 17, wherein~~ A system comprising:

two or more adaptive equalizers;

a plurality of operational blocks;

~~said a~~ means for selectively interconnecting the two or more adaptive equalizers and the plurality of operational blocks, the means for selectively interconnecting comprises a plurality of multiplexers; and

a means for configuring the two or more adaptive equalizers and the plurality of operational blocks according to attributes of a signal profile.

19. (Currently Amended) The system of claim ~~47-18~~ further comprising means for disabling at least one of the plurality of operational blocks according to said attributes of the signal profile.

20. (Currently Amended) The system of claim ~~47-18~~ further comprising means for disabling a computational resource of at least one of the two or more adaptive equalizers according to said attributes of the signal profile.

21. (Currently Amended) The system of claim ~~47-18~~ further comprising means for sharing computational resources of the two or more adaptive equalizers.

22. (Currently Amended) The system of claim ~~47-18~~, wherein the attributes of the signal profile comprise at least one selected from the group consisting of:

- a number of antennas that transmitted the multi-path signal;
- a length of the multi-path signal profile;
- an amount of energy in a single sub-signal of the multi-path signal;
- an amount of capturable energy by a number of adaptive equalizers; and
- a number of energy clusters.